

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES



APPEAL BRIEF FOR THE APPELLANT

Ex parte Ajay KAMALVANSHI et al.


**METHOD AND APPARATUS FOR FAULT TOLERANT PERSISTENCY
SERVICE ON NETWORK DEVICE**

Serial No. 10/027,577

Appeal No.:

Group Art Unit: 2113

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Atty. Docket: 59864.00246

AMC/scw/jkm

Encls: Check No. 14720
Appeal Brief (in triplicate)

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In re the Appellant:

Ajay KAMALVANSI et al.



Appeal No.:

Serial Number: 10/027,577

Group Art Unit: 2113

Filed: December 20, 2001

Examiner: Emerson C. Puente

For: METHOD AND APPARATUS FOR FAULT TOLERANT PERSISTENCY
SERVICE ON NETWORK DEVICE

BRIEF ON APPEAL

July 12, 2006

I. INTRODUCTION

This is an appeal from the Notice of Panel Decision from Pre-Appeal Brief Review dated June 12, 2006, finally rejecting claims 1-21, all of the claims pending in this application. Claims 1-7, 9-15, and 17-21 were rejected as being unpatentable over U. S. Patent No. 5,615,364 to Marks ("Marks"), in view of U.S. Patent No. 5,649,089 to Kilner ("Kilner"), U.S. Patent No. 6,411,969 to Tam ("Tam"), and U.S. Patent No. 6,105,021 to Berstis ("Berstis"). Also, claims 8 and 16 were rejected as being unpatentable over Marks, Kilner, U.S. Patent No. 5,317,742 to Bapat ("Bapat"), and publication "Structure of Management Information Version 2(SMIv2)" by McCloghrie et al. ("McCloghrie"). A Request for Reconsideration was timely filed on March 23, 2006. An Advisory Action was issued on April 7, 2006, rejecting all claims in view of the previously cited references. A

Notice of Appeal and a Pre-Appeal Brief Request for Review was timely filed on April 28, 2006. This Appeal Brief is being timely filed.

II. REAL PARTY IN INTEREST

The real parties in interest in this application are is Nokia Corporation, of Espoo, Finland, by virtue of an Assignment which was submitted for recordation on September 22, 2004, and which was recorded at Reel 015165, Frame 0601, on September 22, 2004.

III. STATEMENT OF RELATED APPEALS AND INTERFERENCES

There are no known related appeals and/or interferences which will directly effect or be directly effected by or have a bearing on the Board's decision in this appeal.

IV. STATUS OF CLAIMS

Claims 1-21, all of the claims pending in the present application are the subject of this appeal.

Specifically, claims 1-7, 9-15, and 17-21 are rejected as being unpatentable over U. S. Patent No. 5,615,364 to Marks ("Marks"), in view of U.S. Patent No. 5,649,089 to Kilner ("Kilner"), U.S. Patent No. 6,411,969 to Tam ("Tam"), and U.S. Patent No. 6,105,021 to Berstis ("Berstis"). Also, claims 8 and 16 are rejected as being unpatentable over Marks, Kilner, U.S. Patent No. 5,317,742 to Bapat ("Bapat"), and publication "Structure of Management Information Version 2(SMIV2)" by McCloghrie et al. ("McCloghrie").

V. STATUS OF AMENDMENTS

Claims 1-16 were originally filed on December 20, 2001. Claims 1 and 9 were amended in a Response which was filed on January 31, 2005. Also, claims 1, 9, and 11-13 were amended and new claims 17-21 were added in a Response filed on July 6, 2005. Claims 1, 9, and 17 were later amended in a Response filed on November 23, 2005. No further amendments to the claims have been made, therefore, claims 1-21 stand rejected. Claims 1-21 are pending.

VI. SUMMARY OF THE INVENTION

The independent claims involved in this appeal are claims 1-21.

Independent claim 1, upon which claims 1-8 are dependent, is directed to a method for providing persistency fault tolerant data stored in a database on a device in a networked environment for an external application. *See, for example*, page 9, lines 12-15, and page 10, lines 16-20 of the specification and Fig. 2, reference numeral 202. The device has an active processor system and a standby processor system. *See, for example*, page 6, lines 2-4 of the specification. The method includes maintaining a checksum for each record in an active database located in the active processor system. *See, for example*, page 11, lines 1-8, of the specification. The method checks the checksum during initialization. *See, for example*, page 11, lines 7-8, of the specification. The method further provides an identical standby

copy of the active database located on the active processor system, on the standby processor system as a standby database and monitors the active processor for a failure. *See, for example*, page 11, lines 8-11 and lines 14-16 of the specification. The method assumes control by the standby processor system when the failure is detected. *See, for example*, page 6, lines 14-15, and page 11, lines 12-13. Switching from the active database to the standby database is transparent to the external application and a magic number is kept to distinguish any tar and zipped file with the standby database. *See, for example*, page 11, lines 16-19, and page 12, lines 1-4 of the specification.

Independent claim 9, upon which claims 10-16 are dependent, is directed to a system for providing persistency fault tolerant data stored in a database on a device in a networked environment for an external application. *See, for example*, page 9, lines 12-15, and page 10, lines 16-20 of the specification and Fig. 2, reference numeral 202. The device has an active processor system and a standby processor system. *See, for example*, page 6, lines 2-4 of the specification. The system includes checksum means for maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization. *See, for example*, page 11, lines 1-8, of the specification. The system includes standby means for providing an identical standby copy of the active database located on the active processor system, on the standby processor system as a standby database. *See, for example*, page 11, lines 8-11 and lines 14-16 of the specification. The system further includes monitor means for monitoring the active processor for a

failure. *See, for example*, page 11, lines 7-9 of the specification. The system includes control means for assuming control by the standby processor system when the failure is detected. *See, for example*, page 6, lines 14-15, and page 11, lines 11-19. Switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database. *See, for example*, page 11, lines 16-19, and page 12, lines 1-4 of the specification.

Independent claim 17, upon which claims 18-21 are dependent, is directed to a device providing persistency fault tolerant data stored in a database. *See, for example*, page 9, lines 12-15, and page 10, lines 16-20 of the specification. The device has an active processor system and a standby processor system. *See, for example*, page 6, lines 2-4 of the specification. The device includes a checksum unit maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization. *See, for example*, page 11, lines 1-8, of the specification. A standby unit provides an identical standby copy of the active database located on the active processor system, on the standby processor system as a standby database. *See, for example*, page 11, lines 8-11 and lines 14-16 of the specification. A monitor unit monitors the active processor for a failure. *See, for example*, page 11, lines 7-9 of the specification. A control unit assumes control by the standby processor system when the failure is detected. *See, for example*, page 6, lines 14-15, and page 11, lines 11-19. Switching from the active database to the standby database is transparent to an external application and a

magic number is kept to distinguish any tar and zipped file with the standby database. *See, for example*, page 11, lines 16-19, and page 12, lines 1-4 of the specification.

VII. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

As mentioned above, the grounds of rejection to be reviewed on appeal are as follows: the rejection of each of claims 1-7, 9-15, and 17-21 under 35 U.S.C. 135 U.S.C. § 103(a) as being obvious over U. S. Patent No. 5,615,364 to Marks (“Marks”), in view of U.S. Patent No. 5,649,089 to Kilner (“Kilner”), U.S. Patent No. 6,411,969 to Tam (“Tam”), and U.S. Patent No. 6,105,021 to Berstis (“Berstis”), and the rejection of each of claims 8 and 16 under 35 U.S.C. 135 U.S.C. § 103(a) as being obvious over Marks, Kilner, U.S. Patent No. 5,317,742 to Bapat (“Bapat”), and publication “Structure of Management Information Version 2(SMiv2)” by McCloghrie et al. (“McCloghrie”).

VIII. APPELLANT’S ARGUMENTS

The Rejection of claims 1-7, 9-15, and 17-21 under 35 U.S.C. 103(a) as being obvious over Marks, Kilner, Tam, and Berstis.

Claims 1-7, 9-15, and 17-21 were rejected under 35 U.S.C. 103(a) as being obvious over Marks, Kilner, Tam, and Berstis. Appellants respectfully traverse this rejection, because, contrary to the contentions made in the final rejection, a combination of Marks, Kilner, Tam, and Berstis would not teach or suggest all the recitations of independent

claims 1, 9, and 17 and related dependent claims.

As discussed on page 10, lines 10-20, of the specification, the present invention recognizes that, conventional databases use complex mechanisms for storing data which are essentially not designed for use as a network device because of their lack of fault tolerance. *See, for example*, page 10, lines 10-12, of the specification. The present invention provides for a new way for storing data which makes it fault tolerant. *See, for example*, page 10, lines 12-13, of the specification. The application services that require persistency information define the layout schema of the database using SMIV2 format. *See, for example*, page 10, lines 13-14, of the specification. Other databases either use a proprietary data definition language or a Structured Query Language (SQL) for defining their data. *See, for example*, page 10, lines 14-16, of the specification. The present invention has elements defined in SMIV2 format which is then used to generate structures and metadata. *See, for example*, page 10, lines 16-17, of the specification. The generated structure is used by the application to read and write data. *See, for example*, page 10, line 18, of the specification. The metadata is used by a database service called datastore to provide access to the data. *See, for example*, page 10, lines 18-20, of the specification.

As discussed in previous responses, in Marks, Kilner, Tam, and Berstis, there is no teaching or suggestion of a magic number used to “to **distinguish** any tar and zipped file **with** the standby database,” as recited in independent claims 1, 9, and 17.

A combination of Marks, Kilner, Tam, and Berstis would fail to teach or suggest all

the recitations of independent claims 1, 9, and 17 and related dependent claims.

1. Independent Claim 1

The office action's interpretation of Marks, Kilner, Tam, and Berstis providing the recitations of independent claim 1 as set forth in the final office action on pp. 2-5, is clearly erroneous.

Marks generally describes primary and backup database operation. Upon changes to the database, the primary and backup communication agents communicate with each other to automatically update the backup database. *See* column 3, lines 1-15. If malfunction occurs, the backup database takes over. *See* column 3, lines 15-20. Also, Marks describes that backup communications are synchronized to primary communications without any manual initialization or re-inputting of any data. *See* column 4, lines 59-63.

In turn, Kilner describes a redundant controller system having an active controller 112 with an active database and a standby controller 115 with a standby database. *See* column 2, lines 56-67. The system maintains a cumulative checksum of the entire database in a network controller 112 for substantially real time tracking changes to a database by providing a record checksum for a record and incorporating uniquely and reversibly the record checksum for the record into a cumulative checksum for the database. *See* column 3, lines 51-64. In addition, Kilner describes a method of updating a standby database, in which, at step 300 an initialization sequence is triggered, and at step 302, the network

controller loads or transfers the database from permanent storage. *See* column 4, lines 55-67.

Tam generally describes a method for developing back-up copies of a source database by providing incremental and accumulate dump commands from various multiple-Users which enable a selection of certain files which are identified independently of time-factor for dumping selectively either onto a separate destination medium of disk or tape. Tam provides that the dump of a database is done to tape or disk depending on what type of storage resources are available. *See* column 6, lines 27-35.

Berstis, in turn, provides conducting a search of a document database containing compressed and non-compressed files. If a document is compressed, it is decompressed to produce a plain text version of a document. The plain text is searched according to search parameters. If the compressed file is not a zip file, a test determines whether the compressed file is a tar file. Tar files are known compressed files used in UNIX based systems. *See* column 7, lines 58-60.

Recognizing that Marks and Kilner are devoid of any teaching or suggestion providing, “a magic number is kept to distinguish any tar and zipped file with the standby database,” as recited in independent claims 1, 9, and 17, the office action relied on Tam as providing such recitation. However, similarly to Marks and Kilner, Tam fails to teach or suggest the features of the magic number recited in the independent claims. Instead, Tam limits its description to providing that a tape or disk that is used to dump a database includes

identification information common to any disk-to-tape process. *See* column 6, lines 27-35. Specifically, such information includes the tape name, the cycle number, the version number, workers, the serial number, compression, and non-compression, the density, and the SCRATCHPOOL option. The information being provided in Tam is not to distinguish any tar and zipped file with the standby database. Rather, the information provided is one that is necessary to a disk-to-tape process. All identifiers used in Tam are to identify the tape or disk used to dump the database, not as a magic number used “to **distinguish** any tar and zipped file with the standby database,” as recited in independent claim 1. Thus, contrary to the contentions made in the office action, Tam does not cure the deficiencies of Marks and Kilner.

Berstis is also used in an attempt to further cure the deficiencies of Marks, Kilner, and Tam. However, Berstis is limited to generally describing that if the compressed file is not a zip file, a test is provide to determine whether the compressed file is a tar file and that tar files are known compressed files used in UNIX based systems. *See* column 7, lines 57-67. Thus, Berstis does not cure the deficiencies of Marks, Kilner, and Tam. The features of independent claim 1 clearly recites that the magic number is used to **distinguish** any tar and zipped file **with** the standby database. Such recitation is not described or suggested in Berstis.

A combination of Marks, Kilner, Tam, and Berstis would provide a primary and backup database operation in a redundant controller system maintaining a cumulative

checksum of the entire database in a network controller. Tam would provide to the combination of the references that when dumping a zip file or a tar file to a tape, information would need to be used to identify the tape. This information would include the tape name, the cycle number, the version number, workers, the serial number, compression and non-compression, the density, and the SCRATCHPOOL option. *See* column 6, lines 27-35 of Tam. If a disk is used, according to Tam, it is only necessary to specify the file title for the entire dump and the number of DUMP files. *See* column 6, lines 36-38 of Tam. However, there is no teaching or suggestion in the combination of Marks, Kilner, Tam, or Berstis that the information would be kept to distinguish any tar and zipped file with the standby database.

When dumping is done to tape, according to Tam, it is necessary to furnish information common to any disk-to-tape process and this information would include the tape name, the cycle number, the version number, workers, the serial number, compression and non-compression, the density, and the SCRATCHPOOL option. *See* column 6, lines 27-35. The information being provided in Tam is not to distinguish any tar and zipped file with the standby database. Rather, the information provided is one that is necessary to a disk-to-tape process.

Accordingly, a combination of Marks, Kilner, Tam, and Berstis would not teach or suggest, at least, “switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file

with the standby database,” as recited in independent claim 1. Therefore, Appellants respectfully request that the rejection of independent claim 1 be reversed.

Additionally, the use of four references to make a rejection of the present claims is an indicator that the Office Action is attempting to use an improper piecemeal analysis of various references in order to make this rejection. Specifically, as commonly understood, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art... “[the Examiner] can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” *See In re Fritch*, 23 USPQ 2d 1780, 1783 (Fed. Cir. 1992).

It appears that the final office action is using the recitations of the claims of the present application to arrive to the combination of Marks, Kilner, Tam, and Berstis. “One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *See In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988). Accordingly, Appellants respectfully request that this rejection be reversed.

2. Claim 2

Dependent claim 2 depends from independent claim 1 and recites the additional features of “further comprising the step of keeping a compressed backup copy of the

database with signature on the active processor system and on the standby processor system.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 2, the arguments presented above supporting the patentability of independent claim 1 over Marks, Kilner, Tam, and Berstis are incorporated herein. Therefore, Appellants respectfully request that the rejection of claim 2 be reversed.

3. Claim 3

Dependent claim 3 depends from dependent claim 2, which in turn depends from independent claim 1, and recites the additional features of “further comprising the step of recovering data from the compressed backup copy when a failure event occurs.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 3, the arguments presented above supporting the patentability of independent claim 1 over Marks, Kilner, Tam, and Berstis are incorporated herein. Therefore, Appellants respectfully request that the rejection of claim 3 be reversed.

4. Claim 4

Dependent claim 4 depends from dependent claim 2, which depends from independent claim 1, and recites the additional features of “further comprising the step of

recovering data from the compressed backup copy when a corruption event occurs.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 4, the arguments presented above supporting the patentability of independent claim 1 over Marks, Kilner, Tam, and Berstis are incorporated herein. Therefore, Appellants respectfully request that the rejection of claim 4 be reversed.

5. Claim 5

Dependent claim 5 depends from independent claim 1 and recites the additional features of “further comprising the step of defining the database using a predetermined format.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 5, the arguments presented above supporting the patentability of independent claim 1 over Marks, Kilner, Tam, and Berstis are incorporated herein. Therefore, Appellants respectfully request that the rejection of claim 5 be reversed.

6. Claim 6

Dependent claim 6 depends from dependent claim 5, which in turn depends from independent claim 1, and recites the additional features of “further comprising the step of generating structure and metadata corresponding to the database using the definition in the

predetermined format.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 6, the arguments presented above supporting the patentability of independent claim 1 over Marks, Kilner, Tam, and Berstis are incorporated herein.

Applicants further submit that the office action’s citation of column 2, line 48, of Marks is misplaced. The referred portion of Marks is limited to providing that Marks uses two computers each of which incorporates a Primary Database and a Communications Agent. The referred portion of Marks is devoid of any teaching or suggestion providing “generating structure and metadata corresponding to the database using the definition in the predetermined format,” as recited in claim 6. Although the final office action recognizes that Marks does not clearly teach such recitations, the final office action conclusively asserts that it would have been inherent to arrive to the claimed recitations of dependent claim 6.

"[W]hen an examiner relies on inherency, it is incumbent on the examiner to point to the 'page and line' of the prior art which justifies an inherency theory." *Ex parte Schricker*, 56 USPQ2d 1723 (BdPatApp&Int 2000). Column 2, line 48, of Marks does not justify how a person of ordinary skill in the art would find it to be inherent to arrive to the claimed recitations of dependent claim 6 when Marks simply provides a Primary Database and a Communications Agent. Specifically, when the final office action contends that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a

teaching or suggestion appears in the prior art. Instead, it appears that the essence of the contention made in the final office action to support inherency is that the recitations or teachings provided in the present invention are necessary for Marks to work. Such contention is improper according to current Patent rules.

In addition, the mere fact that the prior art may be modified in the manner suggested by the Office Action does not make the modification obvious unless the prior art suggested the desirability of the modification. "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988).

Therefore, Appellants respectfully request that the rejection of claim 6 be reversed.

7. Claim 7

Dependent claim 7 depends from independent claim 1 and recites the additional features of "further comprising the step of accessing the active database through an application program interface." Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 7, the arguments presented above supporting the patentability of independent claim 1 over Marks, Kilner, Tam, and Berstis are incorporated herein.

Applicants further submit that the office action's citation of column 3, lines 5-8, of

Marks is misplaced. The referred portion of Marks is limited to providing that whenever an application program (such as a database shall) cause a modification to the primary database, a message is sent from the database to the local communications agent. The referred portion of Marks is devoid of any teaching or suggestion providing “accessing the active database through an application program interface,” as recited in claim 7. There is no accessing of an active database through an application program interface in Marks. Therefore, Appellants respectfully request that the rejection of claim 7 be reversed.

8. *Independent Claim 9*

Independent claim 9 recites, among other things, “control means for assuming control by the standby processor system when the failure is detected wherein switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database.”

Appellants respectfully submit that this feature is neither disclosed nor suggested by a combination of Marks, Kilner, Tam, and Berstis. As previously submitted with respect to independent claim 1, a combination of Marks, Kilner, Tam, and Berstis would provide a primary and backup database operation in a redundant controller system maintaining a cumulative checksum of the entire database in a network controller. Tam would provide to the combination of the references that when dumping a zip file or a tar file to a tape,

information would need to be used to identify the tape. This information would include the tape name, the cycle number, the version number, workers, the serial number, compression and non-compression, the density, and the SCRATCHPOOL option. *See* column 6, lines 27-35 of Tam. If a disk is used, according to Tam, it is only necessary to specify the file title for the entire dump and the number of DUMP files. *See* column 6, lines 36-38 of Tam. However, there is no teaching or suggestion in the combination of Marks, Kilner, Tam, or Berstis that the information would be kept to distinguish any tar and zipped file with the standby database.

When dumping is done to tape, according to Tam, it is necessary to furnish information common to any disk-to-tape process and this information would include the tape name, the cycle number, the version number, workers, the serial number, compression and non-compression, the density, and the SCRATCHPOOL option. *See* column 6, lines 27-35. The information being provided in Tam is not to distinguish any tar and zipped file with the standby database. Rather, the information provided is one that is necessary to a disk-to-tape process.

In addition, a combination of Marks, Kilner, Tam, and Berstis would not provide assuming control by the standby processor system when the failure is detected wherein switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database in association with a control means. Therefore, Applicants respectfully

submit that the office action's citation of various portions of Marks, Kilner, Tam, and Berstis is misplaced because these references do not teach or suggest distinguishing any tar and zipped file with the standby database using a magic number. Applicants respectfully request that the rejection of claim 9 be reversed.

9. Claim 10

Dependent claim 10 depends from independent claim 9 and recites the additional features of "further comprising backup means for keeping a compressed backup copy of the database with signature on the active processor system and on the standby processor system." Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 10, the arguments presented above supporting the patentability of independent claim 9 over Marks, Kilner, Tam, and Berstis are incorporated herein.

10. Claim 11

Dependent claim 11 depends from dependent claim 10, which in turn depends from independent claim 9, and recites the additional features of "further comprising means for recovering data from the compressed backup copy when a failure event occurs." Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 11, the

arguments presented above supporting the patentability of independent claim 9 over Marks, Kilner, Tam, and Berstis are incorporated herein.

11. Claim 12

Dependent claim 12 depends from dependent claim 10, which in turn depends from independent claim 12, and recites the additional features of “further comprising means for recovering data from the compressed backup copy when a corruption event occurs.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 12, the arguments presented above supporting the patentability of independent claim 9 over Marks, Kilner, Tam, and Berstis are incorporated herein.

12. Claim 13

Dependent claim 13 depends from independent claim 9 and recites the additional features of “further comprising means for defining the database using a predetermined format.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 13, the arguments presented above supporting the patentability of independent claim 9 over Marks, Kilner, Tam, and Berstis are incorporated herein.

13. Claim 14

Dependent claim 14 depends from dependent claim 13, which in turn depends from independent claim 9, and recites the additional features of “further comprising means for generating structure and metadata corresponding to the database using the definition in the predetermined format.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 8, the arguments presented above supporting the patentability of independent claim 9 over Marks, Kilner, Tam, and Berstis are incorporated herein. Applicants further submit that the office action’s citation of column 2, line 48, of Marks is misplaced. The referred portion of Marks is limited to providing that Marks uses two computers each of which incorporates a Primary Database and a Communications Agent. The referred portion of Marks is devoid of any teaching or suggestion providing “means for generating structure and metadata corresponding to the database using the definition in the predetermined format,” as recited in claim 14. Although the final office action recognizes that Marks does not clearly teach such recitations, the final office action conclusively asserts that it would have been inherent to arrive to the claimed recitations of dependent claim 14.

"[W]hen an examiner relies on inherency, it is incumbent on the examiner to point to the 'page and line' of the prior art which justifies an inherency theory." *Ex parte Schricker*, 56 USPQ2d 1723 (BdPatApp&Int 2000). Column 2, line 48, of Marks does not justify how

a person of ordinary skill in the art would find it to be inherent to arrive to the claimed recitations of dependent claim 14 when Marks simply provides a Primary Database and a Communications Agent. Specifically, when the final office action contends that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the prior art. Instead, it appears that the essence of the contention made in the final office action to support inherency is that the recitations or teachings provided in the present invention are necessary for Marks to work. Such contention is improper according to current Patent rules.

In addition, the mere fact that the prior art may be modified in the manner suggested by the Office Action does not make the modification obvious unless the prior art suggested the desirability of the modification. "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988).

Therefore, Appellants respectfully request that the rejection of claim 14 be reversed.

14. Claim 15

Dependent claim 15 depends from independent claim 9 and recites the additional features of "further comprising means for accessing the active database through an application program interface." Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any

intervening claims of dependent claim 15, the arguments presented above supporting the patentability of independent claim 9 over Marks, Kilner, Tam, and Berstis are incorporated herein.

Applicants further submit that the office action's citation of column 3, lines 5-8, of Marks is misplaced. The referred portion of Marks is limited to providing that whenever an application program (such as a database shall) cause a modification to the primary database, a message is sent from the database to the local communications agent. The referred portion of Marks is devoid of any teaching or suggestion providing "means for accessing the active database through an application program interface," as recited in claim 15. There is no accessing of an active database through an application program interface in Marks.

Applicants respectfully request that the rejection of claim 15 be reversed.

15. Independent Claim 17

Independent claim 17 recites, among other things, "a control unit assuming control by the standby processor system when the failure is detected, wherein switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database."

Appellants respectfully submit that this feature is neither disclosed nor suggested by a combination of Marks, Kilner, Tam, and Berstis. As previously submitted with respect to

independent claim 1, a combination of Marks, Kilner, Tam, and Berstis would provide a primary and backup database operation in a redundant controller system maintaining a cumulative checksum of the entire database in a network controller. Tam would provide to the combination of the references that when dumping a zip file or a tar file to a tape, information would need to be used to identify the tape. This information would include the tape name, the cycle number, the version number, workers, the serial number, compression and non-compression, the density, and the SCRATCHPOOL option. *See* column 6, lines 27-35 of Tam. If a disk is used, according to Tam, it is only necessary to specify the file title for the entire dump and the number of DUMP files. *See* column 6, lines 36-38 of Tam. However, there is no teaching or suggestion in the combination of Marks, Kilner, Tam, or Berstis that the information would be kept to distinguish any tar and zipped file with the standby database.

When dumping is done to tape, according to Tam, it is necessary to furnish information common to any disk-to-tape process and this information would include the tape name, the cycle number, the version number, workers, the serial number, compression and non-compression, the density, and the SCRATCHPOOL option. *See* column 6, lines 27-35. The information being provided in Tam is not to distinguish any tar and zipped file with the standby database. Rather, the information provided is one that is necessary to a disk-to-tape process.

In addition, a combination of Marks, Kilner, Tam, and Berstis would not provide

assuming control by the standby processor system when the failure is detected wherein switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database in association with a control unit. Therefore, Applicants respectfully submit that the office action's citation of various portions of Marks, Kilner, Tam, and Berstis is misplaced because these references do not teach or suggest distinguishing any tar and zipped file with the standby database using a magic number.

Applicants respectfully request that the rejection of claim 17 be reversed.

16. Claim 18

Dependent claim 18 depends from independent claim 17 and recites the additional features of “further comprising: a backup unit keeping a compressed backup copy of the database with signature on the active processor system and on the standby processor system.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 18, the arguments presented above supporting the patentability of independent claim 17 over Marks, Kilner, Tam, and Berstis are incorporated herein.

17. Claim 19

Dependent claim 19 depends from dependent claim 18, which in turn depends from

independent claim 17, and recites the additional features of “further comprising: a recovering unit recovering data from the compressed backup copy when a failure event or a corruption event occurs.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 19, the arguments presented above supporting the patentability of independent claim 17 over Marks, Kilner, Tam, and Berstis are incorporated herein.

18. Claim 20

Dependent claim 20 depends from independent claim 17 and recites the additional features of “further comprising: a defining unit defining the database using a predetermined format.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 20, the arguments presented above supporting the patentability of independent claim 17 over Marks, Kilner, Tam, and Berstis are incorporated herein.

19. Claim 21

Dependent claim 21 depends from dependent claim 20, which in turn depends from independent claim 17, and recites the additional features of “further comprising: a generating unit generating structure and metadata corresponding to the database using the

definition in the predetermined format.” Because the combination of Marks, Kilner, Tam, and Berstis must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 21, the arguments presented above supporting the patentability of independent claim 17 over Marks, Kilner, Tam, and Berstis are incorporated herein.

The Rejection of claims 8 and 16 under 35 U.S.C. 103(a) as being obvious over Marks, Kilner, Bapat, and McCloghrie.

Claims 8 and 16 were rejected under 35 U.S.C. 103(a) as being obvious over Marks, Kilner, Bapat, and McCloghrie. Appellants respectfully traverse this rejection, because, contrary to the contentions made in the final rejection, a combination of Marks, Kilner, Bapat, and McCloghrie would not teach or suggest all the recitations of dependent claims 8 and 16.

1. Dependent claim 8

Dependent claim 8 depends from dependent claim 5, which in turn depends from independent claim 1, and recites the additional features of “the predetermined format is Structure of Management Information version 2 (SMIv2) format.” Because the combination of Marks, Kilner, Bapat, and McCloghrie must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent

claim 8, the arguments presented above supporting the patentability of independent claim 1 over Marks and Kilner are incorporated herein.

Bapat generally describes a Structure of Management Information (SMI) translated to a schema definition which is used to design the formats and templates of data structures within a database, within which actual information content will be stored. *See* column 7, lines 59-64. In turn, McCloghrie generally describes Internet protocol standards. However, Bapat and McCloghrie do not cure the deficiencies of Marks and Kilner, and, therefore, a combination thereof fails to teach or suggest all the recitations of independent claim 1. For instance, similarly to Marks and Kilner, Bapat and McCloghrie are devoid of any teaching or suggestion providing “switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database,” as recited in independent claim 1.

Thus, a combination of Marks, Kilner, Bapat, and McCloghrie would fail to teach or suggest all the recitations of independent claim 1. Appellants respectfully request that the rejection to independent claim 1 and related dependent claim 8, respectively, be reversed.

2. Dependent claim 16

Dependent claim 16 depends from dependent claim 13, which in turn depends from independent claim 9, and recites the additional features of “the predetermined format is

Structure of Management Information version 2 (SMIv2) format.” Because the combination of Marks, Kilner, Bapat, and McCloghrie must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 16, the arguments presented above supporting the patentability of independent claim 9 over Marks and Kilner are incorporated herein.

As indicated with respect to dependent claim 8, Bapat and McCloghrie do not cure the deficiencies of Marks and Kilner, and, therefore, a combination thereof fails to teach or suggest all the recitations of independent claim 9. For instance, similarly to Marks and Kilner, Bapat and McCloghrie are devoid of any teaching or suggestion providing “switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database,” as recited in independent claim 9.

Thus, a combination of Marks, Kilner, Bapat, and McCloghrie would fail to teach or suggest all the recitations of independent claim 9. Appellants respectfully request that the rejection to independent claim 9 and related dependent claim 16, respectively, be reversed.

IX. CONCLUSION

As explained above, each of claims 1-21 recite one or more elements or features that are neither disclosed nor suggested in the cited references. Among other things, the cited references do not provide the particular features recited in the method of independent claim


1. The office action's interpretation of Marks, Kilner, Tam, and Berstis providing such recitations of claims 1-7, 9-15, and 17-21 and Marks, Kilner, Bapat, and McCloghrie providing such recitations of dependent claims 8 and 16 is erroneous. This final rejection being in error, therefore, Appellants respectfully request that this honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case and indicate the allowability of application claims 1-21.

In the event that this paper is not being timely filed, the Appellants respectfully petition for an appropriate extension of time.

Any fees for such an extension together with any additional fees which may be due with respect to this paper may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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Encls: Appendix 1
Appendix 2
Appendix 3

APPENDIX 1

CLAIMS ON APPEAL

1. A method for providing persistency fault tolerant data stored in a database on a device in a networked environment for an external application, the device having an active processor system and a standby processor system, the method comprising the following steps:

maintaining a checksum for each record in an active database located in the active processor system;

checking the checksum during initialization;

providing an identical standby copy of the active database located on the active processor system, on the standby processor system as a standby database;

monitoring the active processor for a failure; and

assuming control by the standby processor system when the failure is detected,

wherein switching from the active database to the standby database is transparent to the external application and a magic number is kept to distinguish any tar and zipped file with the standby database.

2. The method as recited in claim 1 further comprising the step of keeping a compressed backup copy of the database with signature on the active processor system and on the standby processor system.

3. The method as recited in claim 2 further comprising the step of recovering data from the compressed backup copy when a failure event occurs.

4. The method as recited in claim 2 further comprising the step of recovering data from the compressed backup copy when a corruption event occurs.

5. The method as recited in claim 1 further comprising the step of defining the database using a predetermined format.

6. The method as recited in claim 5 further comprising the step of generating structure and metadata corresponding to the database using the definition in the predetermined format.

7. The method as recited in claim 1 further comprising the step of accessing the active database through an application program interface.

8. The method as recited in claim 5 wherein the predetermined format is Structure of Management Information version 2 (SMIv2) format.

9. A system for providing persistency fault tolerant data stored in a database on a device in a networked environment for an external application, the device having an active processor system and a standby processor system, the system comprising:

checksum means for maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization;

standby means for providing an identical standby copy of the active database located on the active processor system, on the standby processor system as a standby database;

monitor means for monitoring the active processor for a failure; and

control means for assuming control by the standby processor system when the failure is detected wherein switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database.

10. The system as recited in claim 9 further comprising backup means for keeping a compressed backup copy of the database with signature on the active processor system and on the standby processor system.

11. The system as recited in claim 10 further comprising means for recovering data from the compressed backup copy when a failure event occurs.

12. The system as recited in claim 10 further comprising means for recovering data from the compressed backup copy when a corruption event occurs.

13. The system as recited in claim 9 further comprising means for defining the database using a predetermined format.

14. The system as recited in claim 13 further comprising means for generating structure and metadata corresponding to the database using the definition in the predetermined format.

15. The system as recited in claim 9 further comprising means for accessing the active database through an application program interface.

16. The system as recited in claim 13 wherein the predetermined format is Structure of Management Information version 2 (SMIv2) format.

17. A device providing persistency fault tolerant data stored in a database and having an active processor system and a standby processor system, the device comprising:

- a checksum unit maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization;
- a standby unit providing an identical standby copy of the active database located on the active processor system, on the standby processor system as a standby database;
- a monitor unit monitoring the active processor for a failure; and
- a control unit assuming control by the standby processor system when the failure is detected, wherein switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database.

18. The device as recited in claim 17, further comprising:
a backup unit keeping a compressed backup copy of the database with signature on the active processor system and on the standby processor system.

19. The device as recited in claim 18, further comprising:
a recovering unit recovering data from the compressed backup copy when a failure event or a corruption event occurs.

20. The device as recited in claim 17, further comprising:
a defining unit defining the database using a predetermined format.

21. The device as recited in claim 20, further comprising:
a generating unit generating structure and metadata corresponding to the database using the definition in the predetermined format.

APPENDIX 2

Evidence Appendix

No evidence under section 37 C.F.R. 1.130, 1.131, or 1.132 has been entered or will be relied upon by Appellants in this appeal.

APPENDIX 3

Related Proceedings Appendix

No decisions of the Board or of any court have been identified under 37 C.F.R.

§41.37(c)(1)(ii).